The absorbance (symbol: A), usually the y axis of a uv spectrum, is defined as follows.

\[ A = \log \left( \frac{I_o}{I} \right) \]

\( I_o \) = intensity of the light entering the sample
\( I \) = intensity of the light leaving the sample

If the sample absorbs no light,
\[ I = I_o, \]
\[ \frac{I_o}{I} = 1, \]
\[ A = \log \frac{I_o}{I} = \log 1 = 0. \]

If the sample absorbs light,
\[ I < I_o, \]
\[ \frac{I_o}{I} > 1, \]
\[ A = \log \frac{I_o}{I} > 0. \]

Thus, the greater the amount of the light absorbed by the sample, the larger the absorbance.

Contributors and Attributions
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